

REMARKS/ARGUMENTS

Reconsideration of the rejections set forth in the Office Action dated August 9, 2005 is respectfully requested. Claims 1-31 are currently pending. Claims 1-4 and 7-31 have been rejected. Claims 5 and 6 have been objected to.

Claim Objections

The Examiner has objected to the numbering of the claims. In a sincere effort to overcome the Examiner's objection to the claims, the Applicant has corrected misnumbered claim 25 by renumbering it as claim 31.

Allowable Subject Matter

Claims 5 and 6 have been objected to as being dependent upon a rejected base claim. The Examiner has indicated that claims 5 and 6 would be allowable if rewritten in independent form to include all of the limitations of their base claim and any intervening claims. As the Applicant believes that independent claim 1, from which claims 5 and 6 each depend, is allowable over the cited art, the Applicant has chosen not to rewrite claims 5 and 6 in independent form at this time.

Rejections under 35 U.S.C. § 102

Claims 1-4 and 7-31 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. US 2002/0150041 filed by Reinshmidt et al., herein after "Reinshmidt."

1. *Independent Claims 1, 14, 25, 31, and their respective dependents*

Independent claim 1 recites a method for detecting a forwarding problem within an autonomous system. The method includes forwarding a message from a source node of the

autonomous system along a path to an external address that is not an address located within the autonomous system. The message is removed from the path at a destination node of the autonomous system, and a response is initiated from the destination node that is arranged to be sent to the source node along a first path segment of the path. The response is arranged to indicate that the intermediate node does not have a forwarding problem.

The Examiner has argued that Reinshmidt teaches the limitations of claim 1. The Applicant respectfully disagrees. Regarding the limitation that a message being sent from a source node of an autonomous system to an external address along a path is removed from the path at a destination node of the autonomous system, the Examiner argues as follows on page 3 of the Office Action dated August 9, 2005:

“....receiving the message on the destination node (B2), wherein a portion of the path (C, D, ...) between the source node (A2) and the destination node (B2) is a first path segment (14), removing the message (ping) from the path at the destination node (B2)....”

While Fig. 1 of Reinshmidt appears to show nodes and paths, there is no teaching in Reinshmidt of removing a message from a source node of an autonomous system that is intended for an external address from a path at a destination node of the autonomous system. The Examiner only cites Fig. 1 in his rejection, yet the Applicant fails to understand how Fig. 1 shows removing a message from a source node of an autonomous system that is intended for an external address from a path at a destination node of the autonomous system. Fig. 1 simply shows a default path between two users (Reinshmidt, paragraph [0073]).

It is noted that the destination node of claim 1 is not a message destination to which a message is arranged to be sent – rather, the message destination of claim 1 is an external address. In other words, the “message destination” of the message initiated by a source node of an autonomous system is an external address, and is not a destination node of the autonomous system. Reinshmidt discloses that a ping packet is transmitted from a source node to a destination node, and that the packet reaches the destination node and returns to the source node (Reinshmidt, paragraph [0025]). The destination node of Reinshmidt appears to be a message

destination of the ping packet. Hence, the ping packet of Reinshmidt does not appear to be removed from a path at a destination node that is not a message destination. Therefore, claim 1 is believed to be allowable over the cited art for at least this reason.

Claim 1 also recites that a response is initiated from the destination node that is arranged to be sent to the source node along a first path segment of the path, and that the response is arranged to indicate that the intermediate node does not have a forwarding problem. The Examiner has cited Fig. 1 of Reinshmidt, as well as paragraphs [0073] and [0074] of Reinshmidt, as teaching this limitation. It is respectfully submitted that neither the figures nor the paragraphs even mention initiating any response that indicates that an intermediate node does not have a forwarding problem. Reinshmidt discusses intermediate nodes, but does not describe any response that indicates that an intermediate node does not have a forwarding problem.

The Examiner mentions a target reply on page 3 of the Office Action dated August 9, 2005. However, the Applicant is unable to locate any teaching of a target reply anywhere in Reinshmidt. It is respectfully submitted that at paragraph [0025], Reinshmidt discloses that a ping packet reaches a destination node and returns to a source node. Such a ping packet is not initiated from the destination node, and is not a target reply. Accordingly, claim 1 is believed to be allowable over the cited art for at least this additional reason as well.

Claims 2-7 each depend either directly or indirectly from claim 1 and are, therefore, each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1. Each of these dependent claims recites additional limitations which, when considered in light of claim 1, are believed to further distinguish the claimed invention over the cited art. By way of example, the Examiner has already indicated that he believes claims 5 and 6 contain allowable subject matter.

Independent claims 14, 25, and 31 each recite similar limitations as recited in claim 1. As such, claims 14, 25, 31, and their respective dependent claims are each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1.

2. *Independent Claims 8, 19, 30, and their respective dependents*

Independent claim 8 recites a method for detecting a forwarding problem within an autonomous system. The method includes forwarding a message from a source node of the autonomous system along a path to an external address that is not an address located within the autonomous system. A determination is made regarding whether a response to the message (the message that is sent along the path to the external address) is received from the destination node, which is not the message destination. The method also includes initiating a process to identify a source of the forwarding problem when it is determined that the response to the message is not received from the destination node.

It is respectfully submitted that while Reinshmidt discloses sending a message, there is no teaching in Reinshmidt of determining whether a response to a message (namely a message sent to an external address through a destination node) is received from the destination node. Assuming that the external address in Reinschmidt is associated with end user 11a of Fig. 1 and the destination node is router B2, there is no teaching or suggestion in Reinschmidt of router B2 (a destination node) sending a response to a message that is sent to end user 11a (an external address). Further, there is no teaching or suggestion of initiating a process to identify a source of a forwarding problem when it is determined that a response to a message is not received from a destination node. The Applicant notes that the Examiner does not appear to have addressed this limitation; however, it is submitted that Reinshmidt fails to teach this limitation. As such, claim 8 is believed to be allowable over the cited art for at least the reasons set forth.

Claims 9-13 each depend from claim 8 and are each believed to be allowable over the cited art for at least the reasons set forth with respect to claim 8. Each of these claims also recites additional limitations which, when considered in light of claim 8, are believed to further distinguish the claimed invention over the cited art. By way of example, claim 10 recites that a message is a traceroute message. In his arguments on page 4 of the Office Action dated August 9, 2005, the Examiner has argued that claim 8 has “....limitation that is similar to those of claims

8 ... thus it is rejected with the same rationale applied against claims 8....” The Examiner has failed to even consider that claim 10 limits a message sent to an external address to being a traceroute message. There is no disclosure in Reinshmidt that any message is a traceroute message. Therefore, claim 10 is believed to be allowable over the cited art for at least this additional reason as well.

Independent claims 19 and 30 each recite similar limitations as recited in claim 8. Accordingly, claims 19, 30, and their respective dependent claims are each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 8.

Conclusion

For at least the foregoing reasons, the Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 868-4096.

Respectfully submitted,



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